

Patent Claims

- 5 1. Method for determining movement data of a mobile station (15) which is associated with a mobile radio network and in which, for a plurality of base stations (23, 24, 25, ...) which are associated with the mobile radio network and which successively supply the mobile station (15) as it moves, at least the location information (Z; X, Y) which is associated with the base stations (23, 24, 25, ...) is stored and the movement data is derived from a sequence of stored location information (Z1; X1, Y1 - Z2; X2, Y2 - ...).
- 10 2. Method according to Claim 1, characterized in that the code number of a radio cell (Z1, Z2, Z3, ...) which is associated with a respective base station (23, 24, 25, ...) is stored as location information.
- 15 3. Method according to Claim 1 ~~or 2~~, characterized in that the geographic coordinates (X, Y) of a respective base station are stored as location information.
- 20 4. Method according to Claim 1, ~~2 or 3~~, characterized in that in addition the time at which the mobile station (15) is supplied from a respective base station from among the base stations (23, 24, 25, ...) is stored.
- 25 5. Method according to ^{Claim 1} ~~one of Claims 1 to 4~~, characterized in that in addition a reception field strength of a signal transmitted between the mobile station and respective base station is stored.
- 30 6. Method according to ^{Claim 1} ~~one of Claims 1 to 5~~, characterized in that a direction of movement of

the mobile station (15) is determined as movement data from the stored sequence of location information, if appropriate making use of a reception field strength of a signal transmitted between the mobile station and base station.

7. Method according to Claim 6, characterized in that the stored sequence of location information and, if appropriate, the reception field strength are used to determine coordinates of a road (22) which constitute movement data.

8. Method according to ~~one of Claims 4 to 7~~, characterized in that a velocity of the mobile station (15) is determined as movement data from the stored sequence of location information and the times at which the mobile station (15) has been supplied by the respective base stations (23, 24, 25, ...).

9. Method according to ^{claim 1} ~~one of Claims 1 to 8~~, characterized in that the location information and/or the times and/or the reception field strengths and/or the movement data are stored separately from the mobile station (15) in a memory (31).

10. Method according to ^{claim 1} ~~one of Claims 1 to 8~~, characterized in that the location information and/or the times and/or the reception field strengths and/or the movement data are stored in a memory (17) of the mobile station (15).

11. Method according to Claim 10, characterized in that the location information and/or the times and/or the reception field strengths and/or the movement data are transmitted to a service provider (29) when necessary.

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12. Method according to Claim 9 ~~or 11~~, characterized in that information which is dependent on the movement data determined is transmitted to the mobile station (15).
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13. Mobile radio network having a plurality of base stations (23, 24, 25, ...) for supplying at least one mobile station (15), and having at least one central station (29) which is designed in such a way that, for a plurality of base stations (23, 24, 25, ...) which successively supply the mobile station (15) as it moves, said central station (29) stores at least the location information (Z; X, Y) associated with the base stations (23, 24, 25, ...) and determines movement data of the mobile station (15) from a sequence of stored location information.
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14. Mobile station (15) for a mobile radio network having a plurality of base stations (23, 24, 25, ...), which mobile station (15) is designed in such a way that, for a plurality of base stations (23, 24, 25, ...) which successively supply the mobile station (15) as it moves, said mobile station (15) stores, as a sequence, at least the location information (Z, X, Y) associated with the base stations (23, 24, 25, ...).
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15. Mobile station (15) according to Claim 14, characterized by a switching device (19a) for transmitting the stored sequence of location information to a central station (29).
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16. Mobile station (15) according to Claim 14, characterized in that it has a determination device (16a) which determines movement data of the mobile station (15) from the stored sequence of location information.
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